An assessment of the development of

mathematical concepts

Teacher's administration booklet

MATHS ASSESSMENT

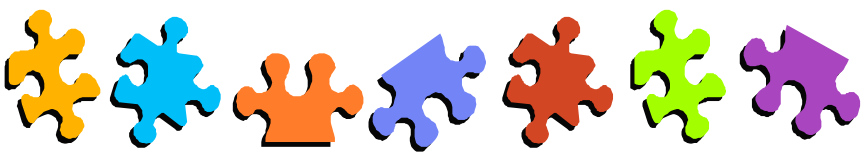
FOR 10 AND 11 YEAR OLDS

This is designed especially for the Children of the 90s. It is not like the national assessments and is aimed at identifying different concepts. Your children will hopefully find it interesting and fun.

All the children have their own answer booklet. Please read the instructions and allow the children enough time to attempt each question. If you feel you need to rephrase any instructions, feel free to do so as long as you ensure that you are not giving the children extra clues.

Please make sure that each child has a pencil and that there are no rulers on the tables before you start the assessment.

Thank you



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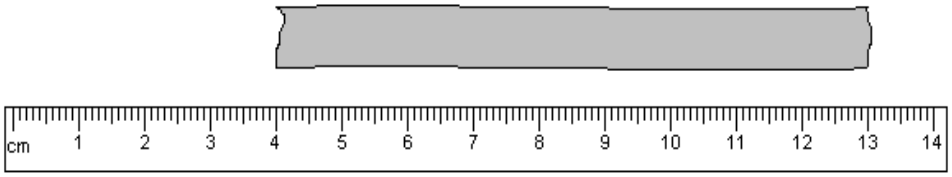
June 2002



Answer ☐ **cm**

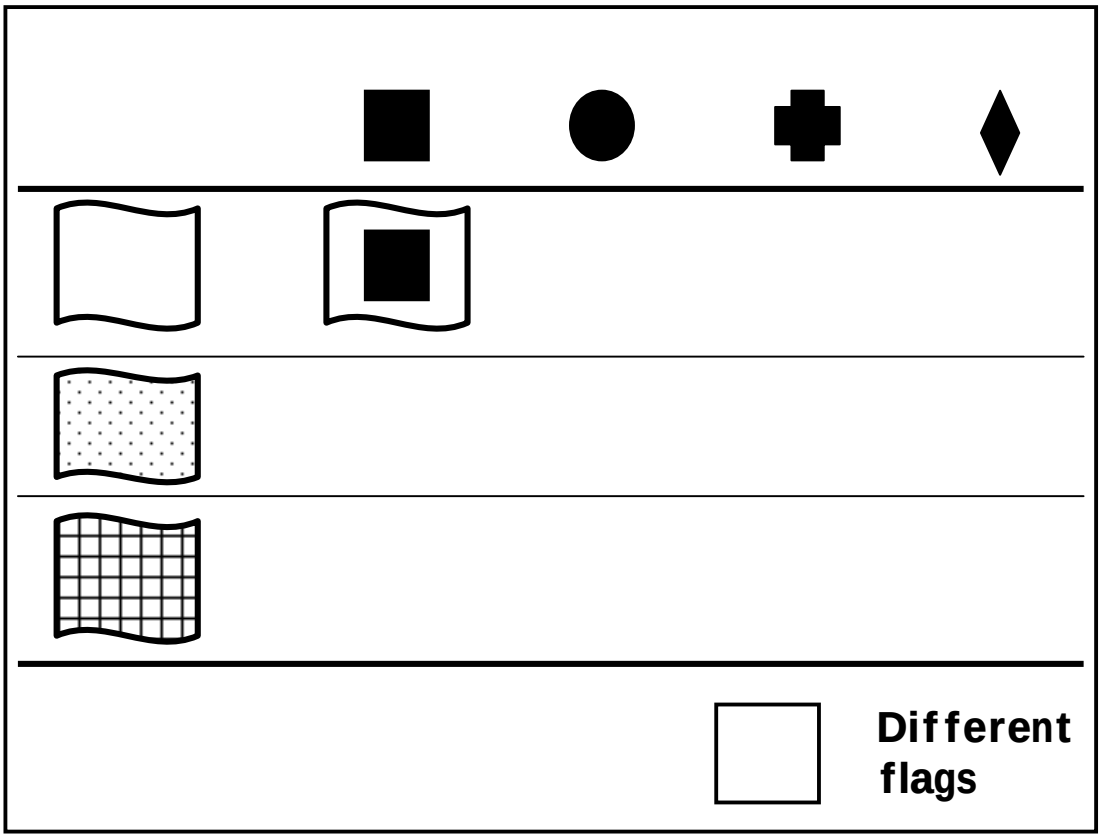
Make sure there are no rulers on the table before this question is asked)

Here is a picture of a ribbon and a ruler.

How long is the ribbon?

Use the ruler in the picture to help you find out.

Write your answer in the empty box.

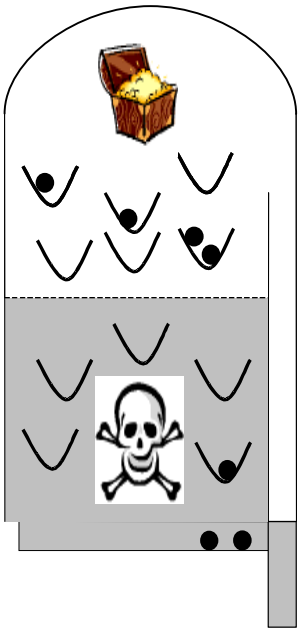


At Pear Tree School they have three different types of material that the students can use to make as many flags as they need. One is plain, one has some dots, and the third has squares.

The teacher brought boxes with 4 different figures for the children to paste on the centre of the flags. The teacher wants the children to make as many different flags as they can.

Imran has made one flag using plain material and a square figure.

How many different flags can the children make? Write your answer in the box.



Won 4 points

Lost 1 point

No points on 2 pinballs

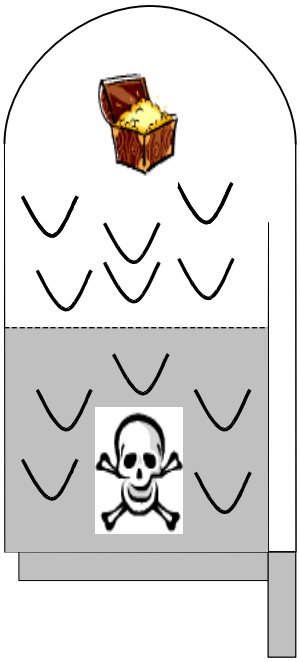
Game 1

In the pinball game, you win one point for each pinball that falls into the top area, where there is a treasure. Look at game 1. There are 4 pinballs in the treasure area.

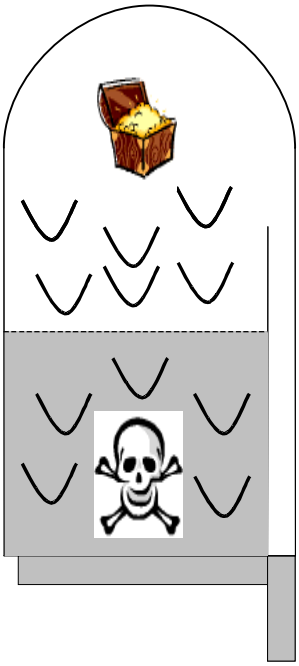
You lose one point for each pinball that falls into the bottom area, where there is a skull. Look at game 1. There is one pinball in the skull area.

If your pinballs fall into the tube, you do not score. Look at game 1. There are 2 pinballs in the tube.

What is the score for this game? Write your answer on the line.



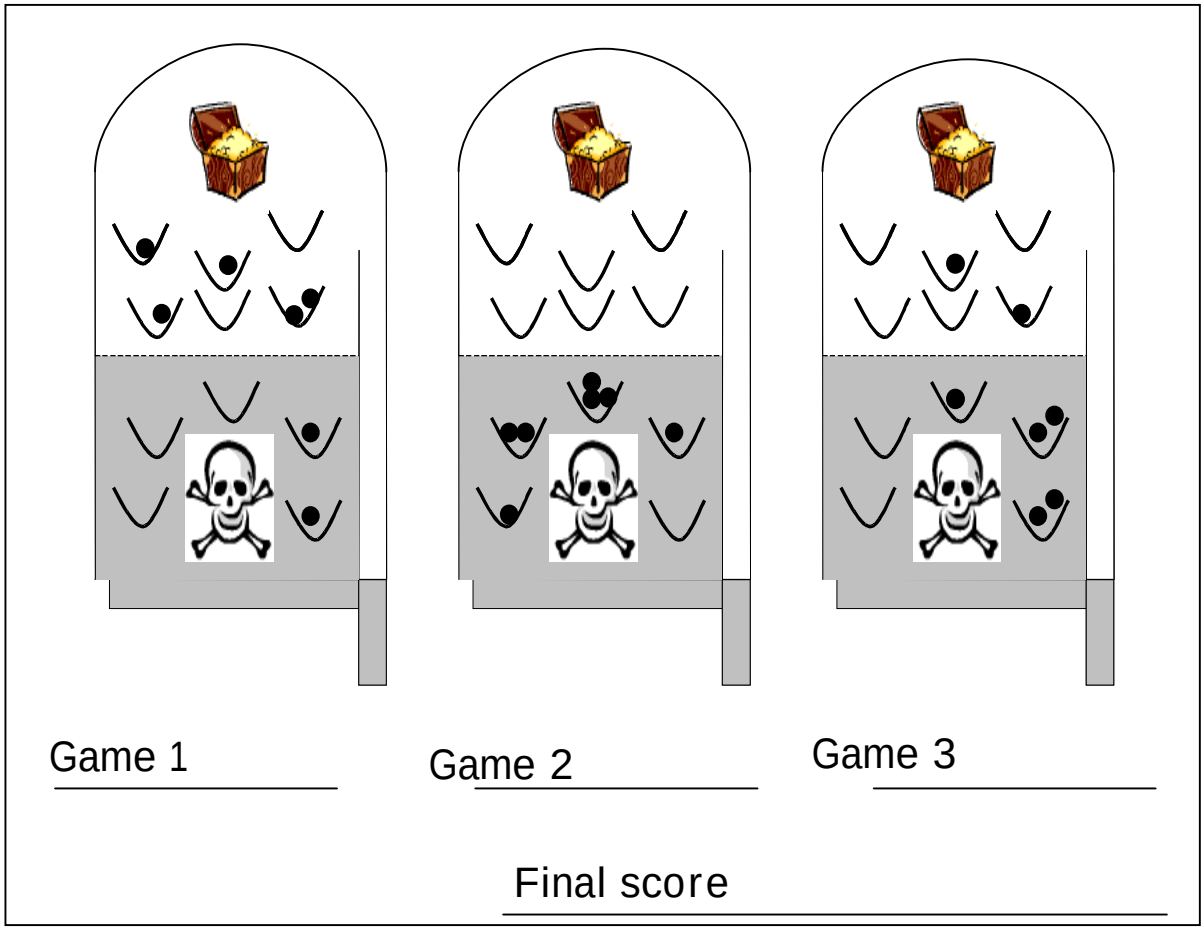
Game 1: lost 3 points



Game 2: won 4

Ali played 2 games. When he played Game 1, he lost 3 points. Draw in the 7 pinballs to make him end with a losing score of 3 points.

When he played Game 2 he won 4 points. Draw in the 7 pinballs to make him end with a winning score of 4.

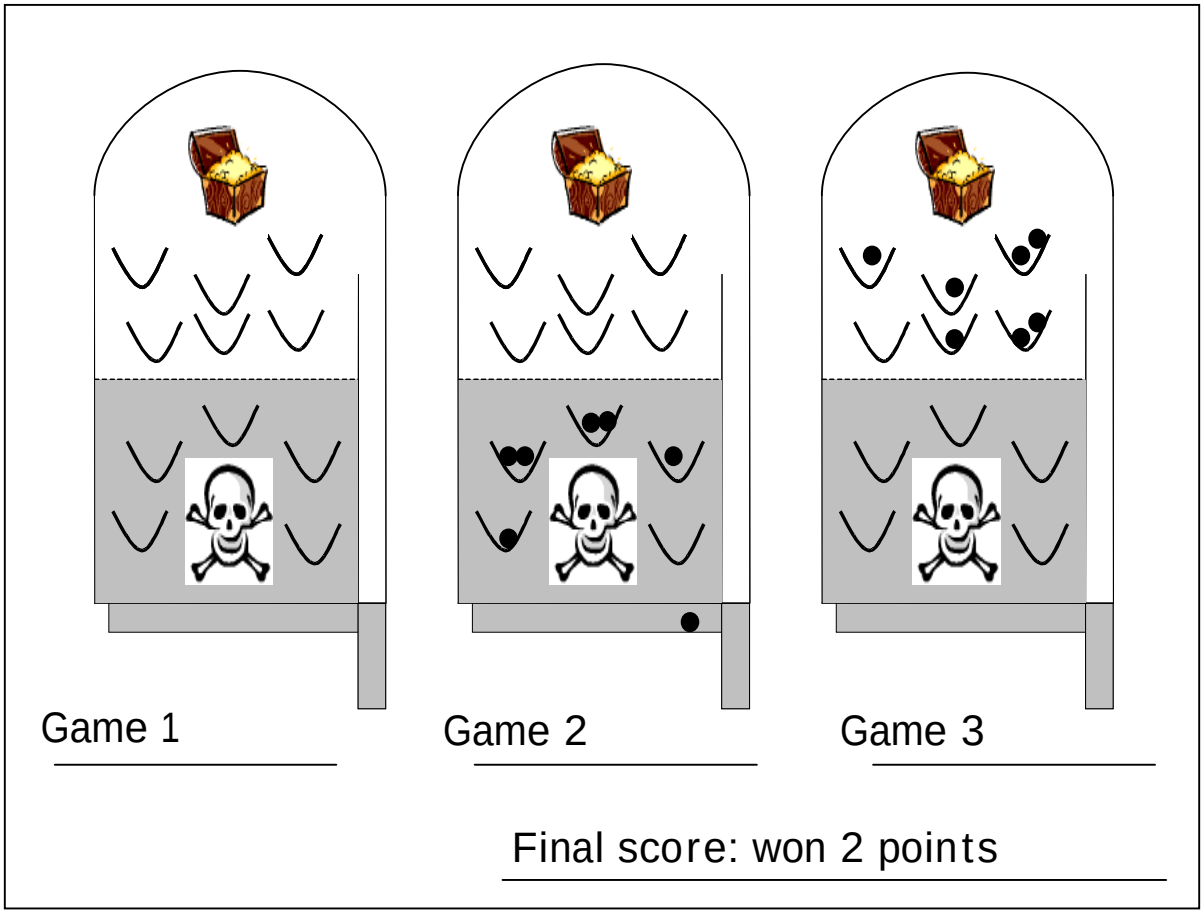


Sarah played 3 games. Look at the first game. What was her score for Game 1? Write your answer on the line for Game 1.

What was her score for Game 2? Write your answer on the line for Game 2.

What was her score for Game 3? Write your answer on the line for Game 3.

She wanted to know her final score counting all three games. What was her final score?

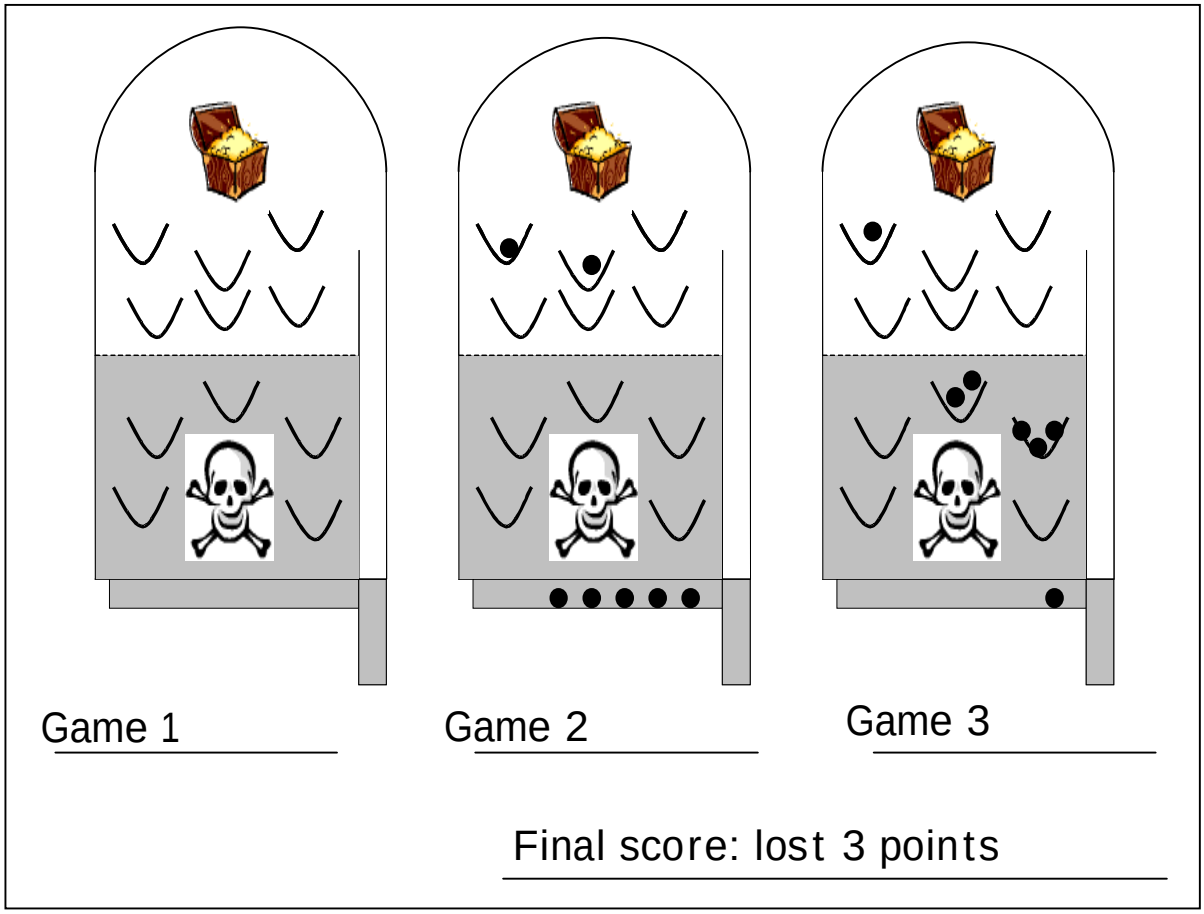


Andrew also played 3 games. He can't remember what happened in the first game.

What was his score for Game 2? Write your answer on the line for Game 2.

What was his score for Game 3? Write your answer on the line for Game 3.

He wrote down his final score counting all three games. It was a winning score of 2 points. What happened in the first game? Write his score for Game 1 on the line.

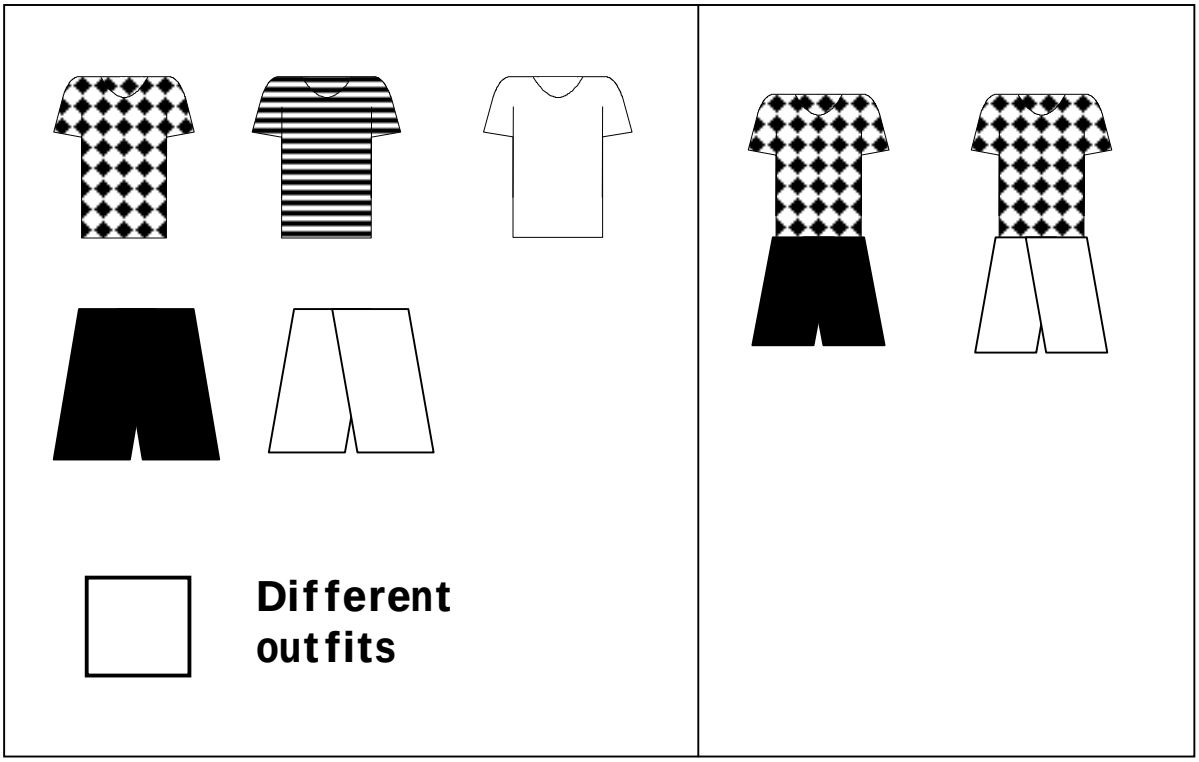


Sandra played 3 games. She can't remember what happened in the first game.

What was her score for Game 2? Write your answer on the line for Game 2.

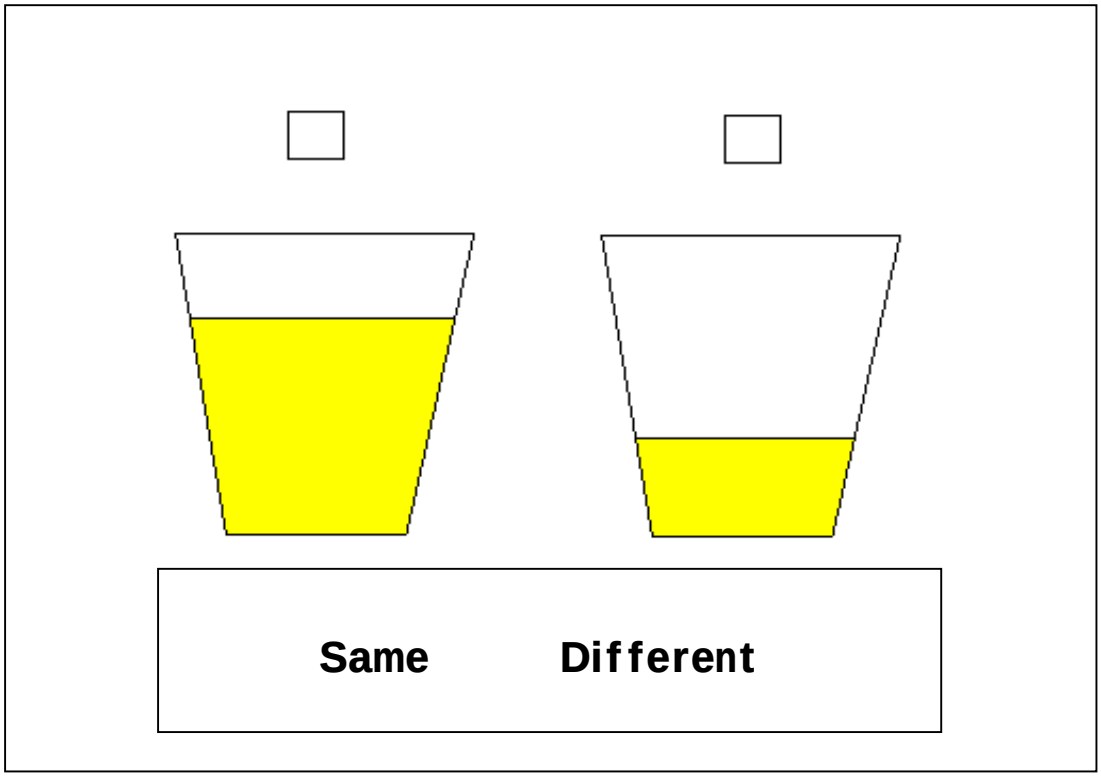
What was her score for Game 3? Write your answer on the line for Game 3.

She wrote down her final score counting all three games. It was a losing score of 3 points. What happened in the first game? Write her score for Game 1 on the line.



Rebecca has three different shirts and two different pairs of shorts. You can see them on the left side of the page. She can combine the shirts with shorts and wear different outfits. You can see on the right side of the page how she can wear the same shirt with the two shorts and have different looking outfits.

If she changes her shirts and shorts around to make different outfits, how many different outfits can she make?



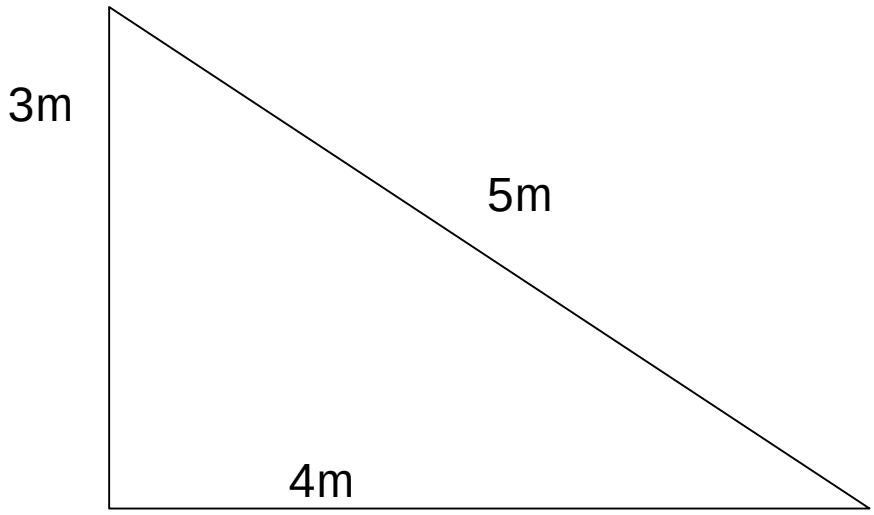
Lemon juice doesn't come with sugar.

One glass has more lemon juice and the other has less lemon juice.

Suppose you mix one lump of sugar in each glass. Then you stir it very well [show with gestures the separate stirring of each glass]. Is the lemon juice in one glass going to taste just like the lemon juice in the other glass or are they going to taste different?

Circle 'same or 'different'.

If you circled different, tick the lemon juice that you think will be sweeter.

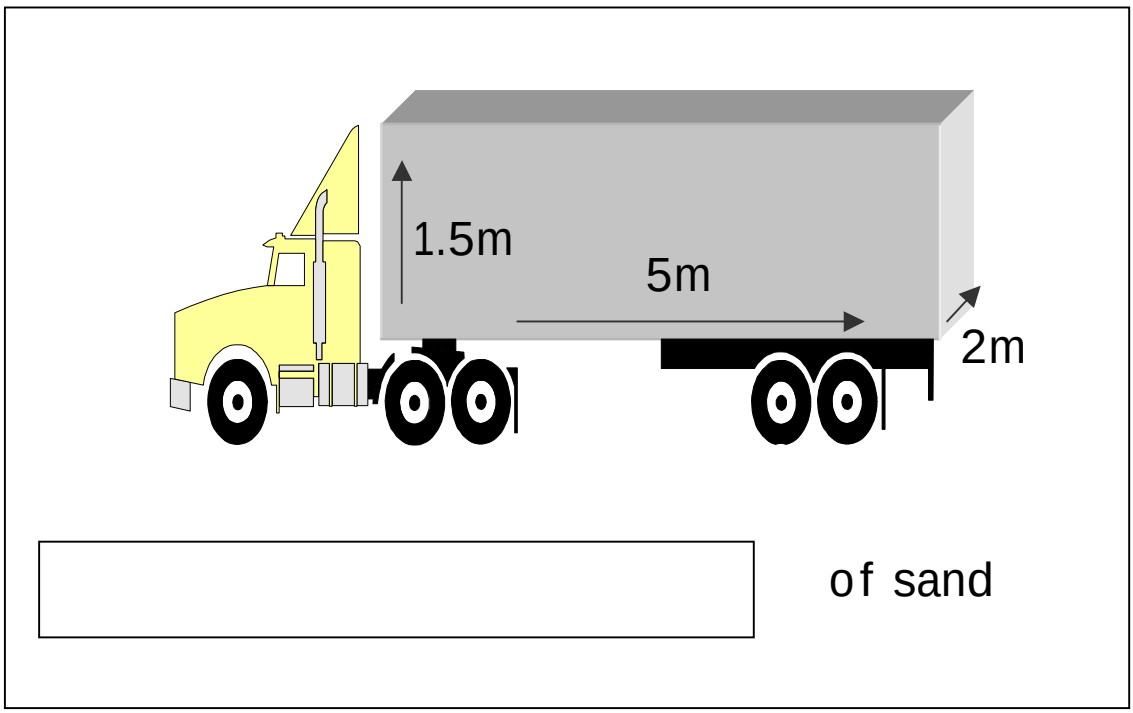


[ ] of tape Paint for [ ]

Washington's room is in the loft. The wall at the end of the room is like a triangle. He wants to decorate it and paint only that wall in dark green.

He will need to buy tape to put around the edges of the wall so he does not paint the ceiling, the floor or the other wall. How much tape does he need? Write your answer in the box. Don't forget to put the unit of measurement.

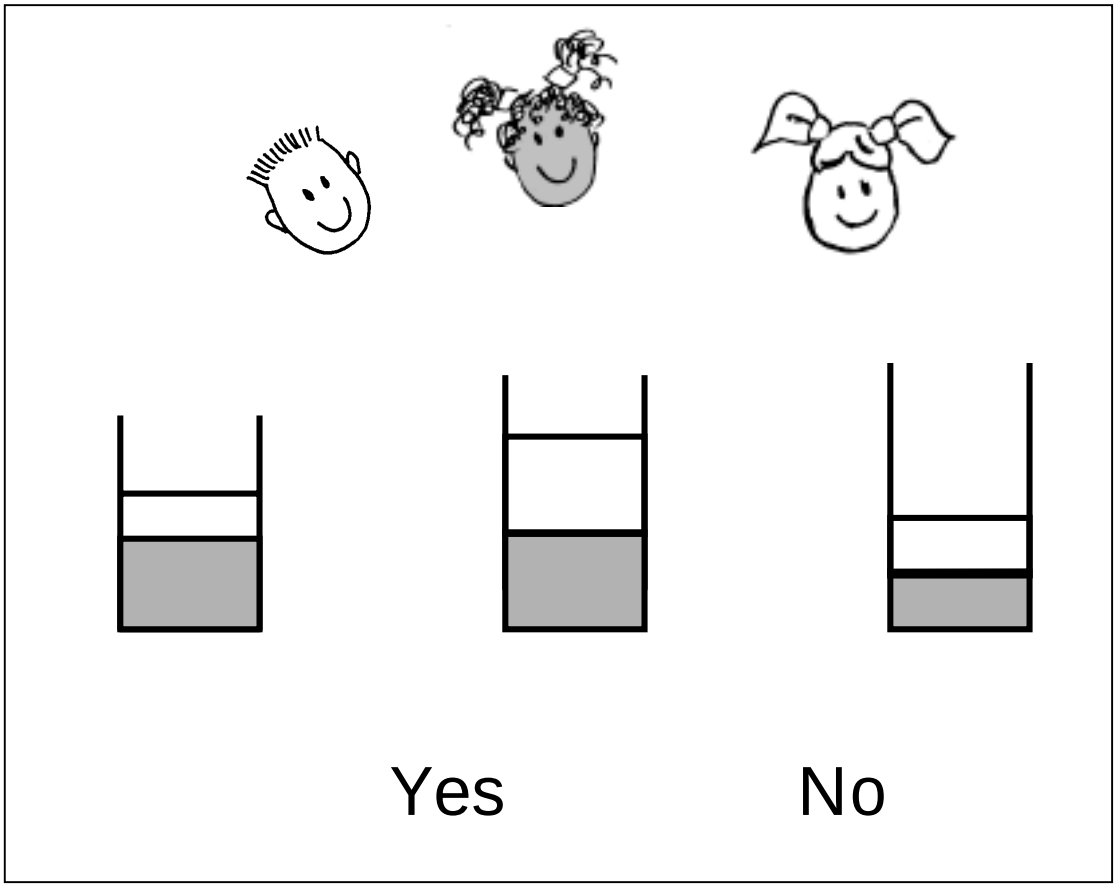
He also needs to buy enough paint to cover the wall. His father told him to work out the area he is going to paint so he can know how much paint he needs. Write the area in the box on the right – don't forget the unit of measurement.



of sand

Ryan's father drives a lorry and carries building materials. In the picture you can see the size of the trailer where he puts the materials. Today the trailer is filled with sand all the way to the top.

What volume of sand is he carrying? Write your answer in the box including the unit of measurement.



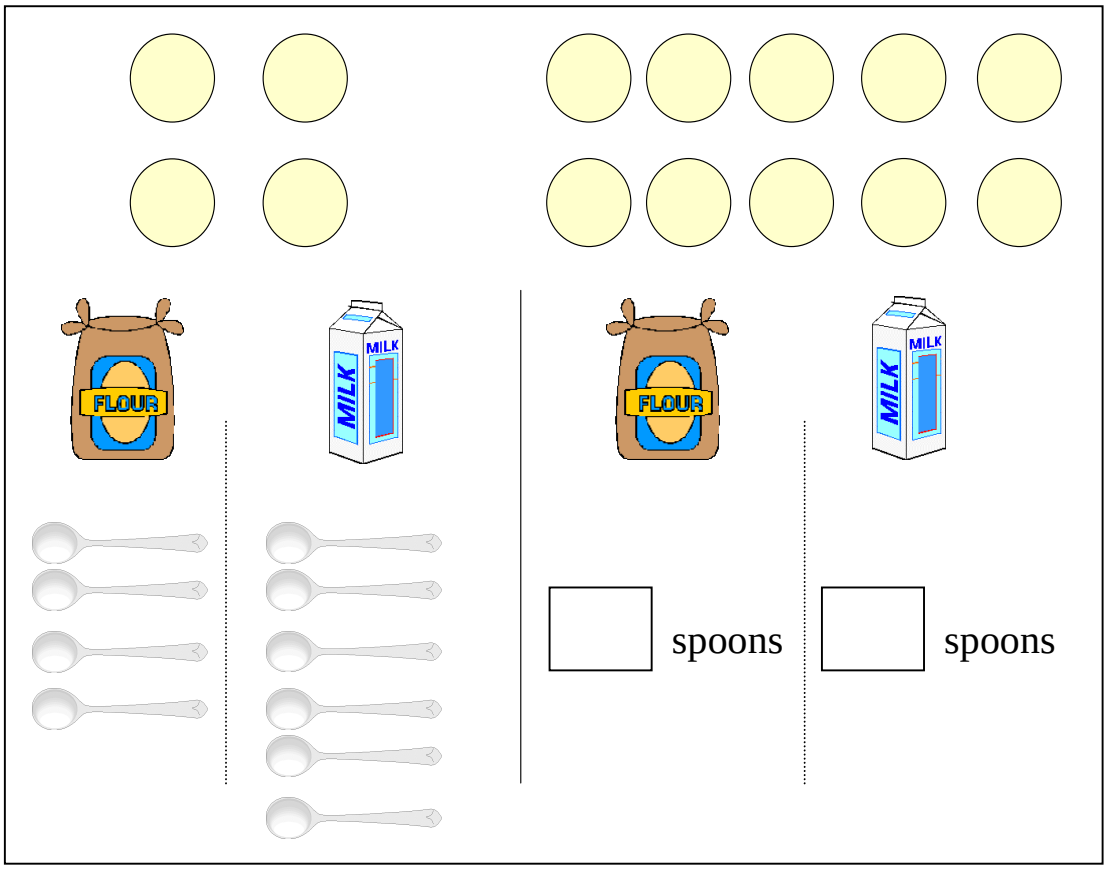
Three children are making orange squash

(if the children don't understand this, try saying that the children are making a brand name drink like Ribena).

In the picture the orange squash is grey and the water is white. The children then stir their drinks.

Will the drink in two of the glasses taste the same? Circle 'yes' or 'no'.

If you answered yes, tick the glasses that you think have squash with the same taste.



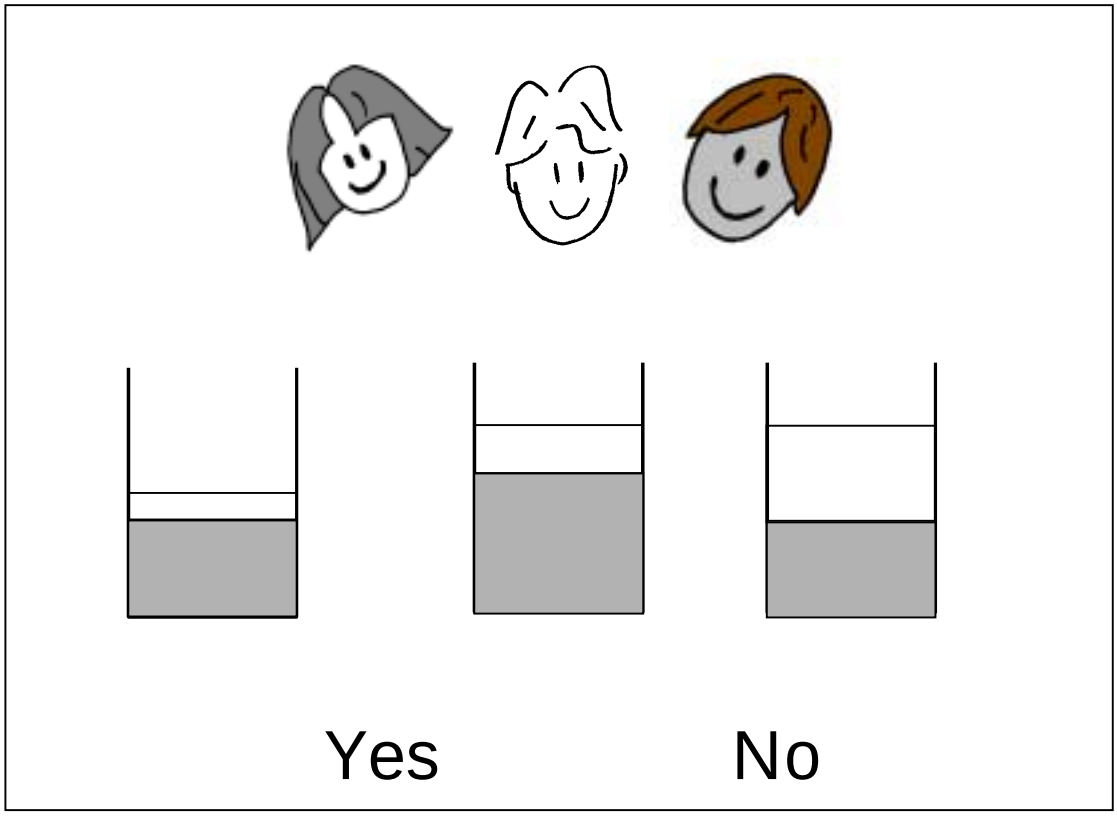
When you make pancakes if you use too much flour the mixture gets too thick. If you use too much milk the mixture gets too thin.

To make 4 good pancakes, you need to mix 4 spoons of flour with 6 spoons of milk.

If you want to make 10 good pancakes, how much flour do you need? Write the number of spoons.

How much milk do you need for 10 good pancakes?

Write the number of spoons.



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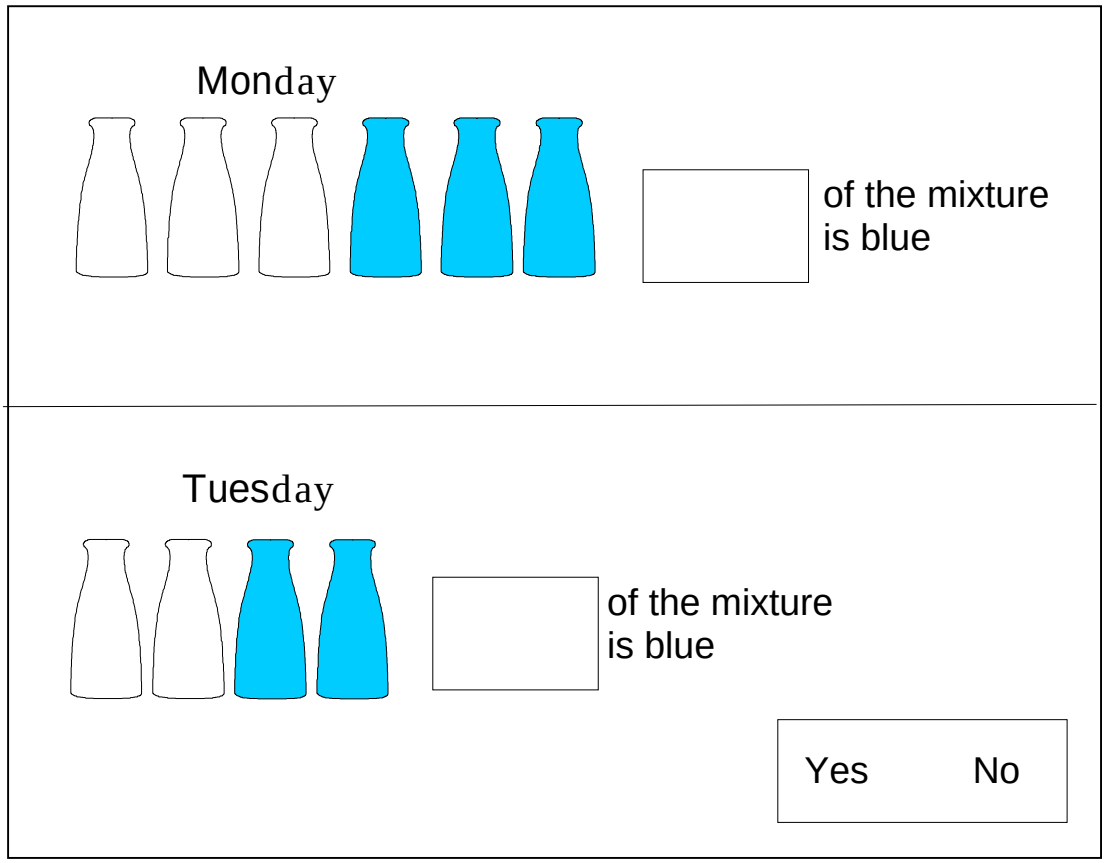
30 days

days

Mrs Green has two cats. Mrs Patel has four cats. All the cats eat the same amount each day. The two women went out together to buy cat food. They bought the same amount of cat food.

Mrs Green said that the food she bought is enough for her cats to eat for 30 days. How long do you think the food Mrs Patel bought will last?



Imagine you are mixing paint.

On Monday you mix 3 bottles of white and 3 of blue (appears grey in the picture).

On Tuesday you mix 2 bottles of white and 2 of blue.

Will the colour of the mixed paint look the same on Monday as Tuesday?

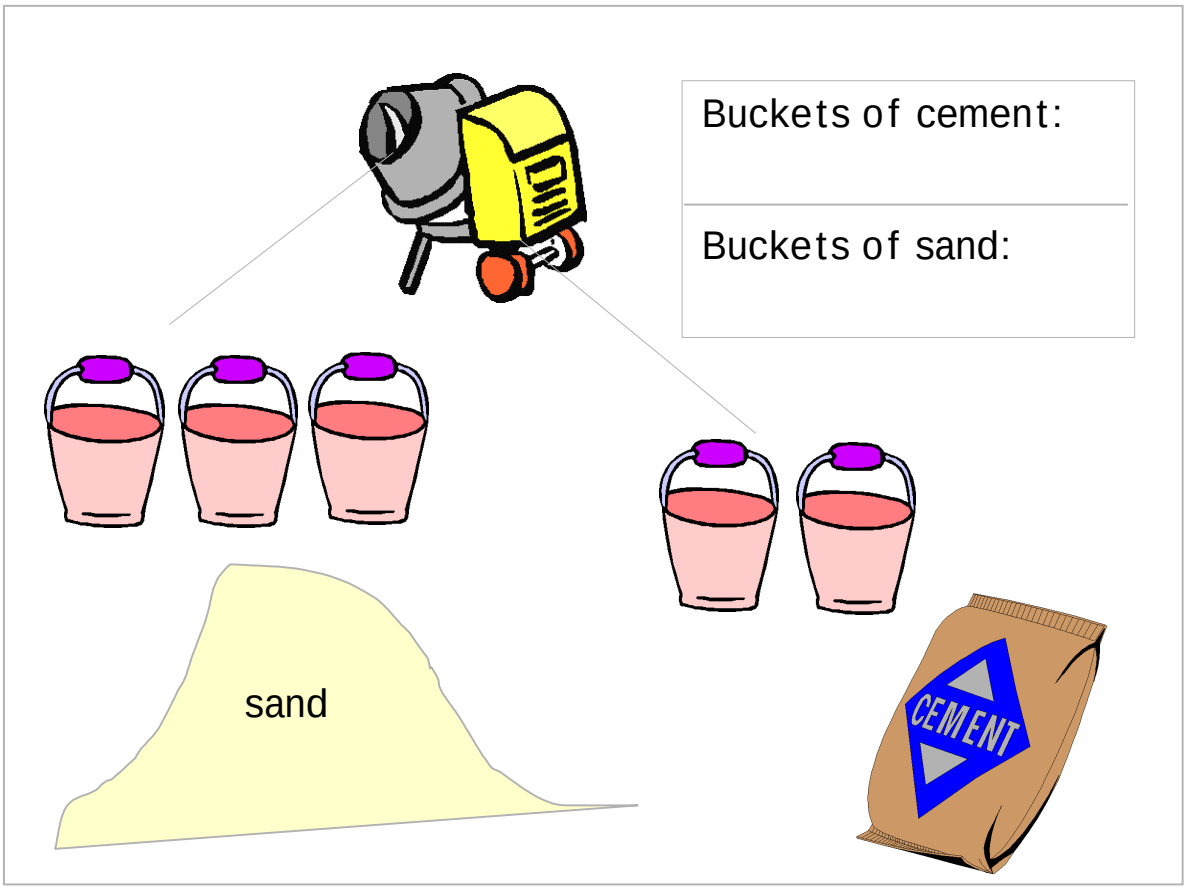
Circle 'yes' or 'no' in the box at the bottom of the picture.

Let's look at Monday. What fraction of the paint is blue on Monday?

Write your answer in the box.

Let's look at Tuesday. What fraction of the paint is blue on Tuesday?

Write your answer in the box.



To make concrete you mix sand and cement.

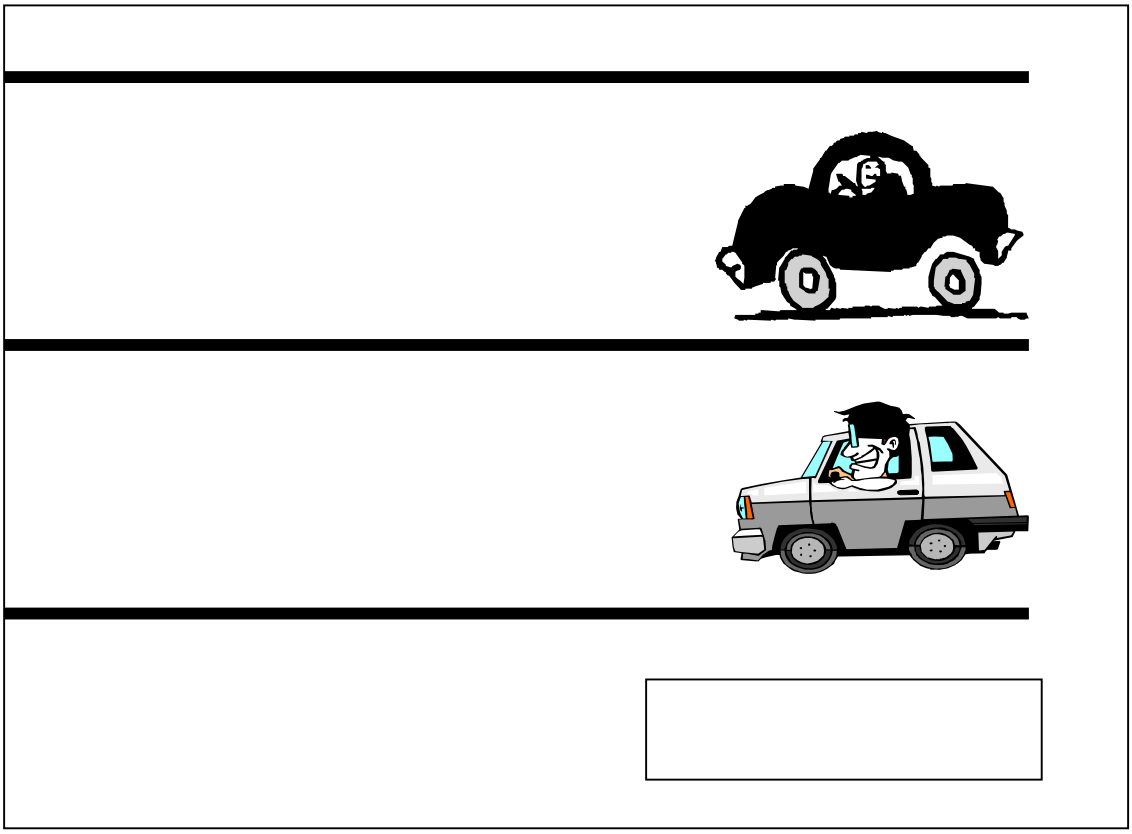
If you put too much cement it gets too hard. And with too much sand it crumbles.

To make 5 buckets of concrete you have to mix 3 buckets of sand for every 2 buckets of cement.

A builder needs to prepare 15 buckets of concrete.

How much sand will he use? Put the answer in the box.

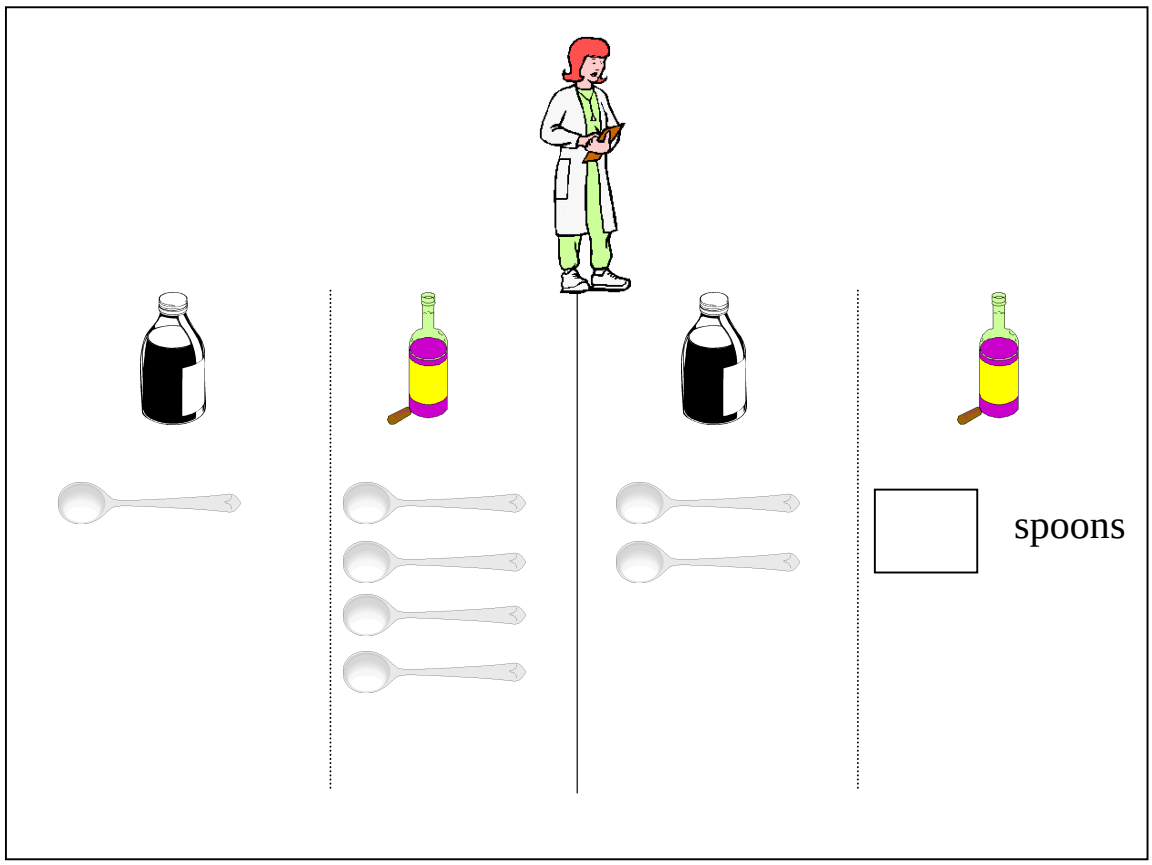
How much cement will he use? Put the answer in the box.



The two cars are travelling on the same road and going to the same place.

The black car is travelling at 50 miles per hour. It will take 3 hours for it to get to the destination.

The grey car is travelling at 75 miles per hour. How long will it take for the grey car to reach the destination? Write your answer in the box. Don't forget the unit of measurement.



There is a medicine that is very bitter and the chemist mixes it with syrup for the children to make it taste better.

Yesterday she mixed 1 spoon of medicine with 4 spoons of syrup.

Today she had to make more mixture and she will have to use 2 spoons of medicine.

How many spoons of syrup will she need for the mixture to taste the same as yesterday.

Write the number of spoons under the syrup bottle.

Many thanks for you help
Please return this booklet together with those of the child(ren) to:

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